

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THE MANGROVE PARTNERS MASTER FUND, LTD., APPLE INC., AND
BLACK SWAMP, LLC,
Petitioner

v.

VIRNETX INC.,
Patent Owner

Case IPR2015-01047¹
Patent No. 7,490,151

**PATENT OWNER VIRNETX INC.'S
AMENDED NOTICE OF APPEAL**

¹ Apple Inc. and Black Swamp, LLC, which filed petitions in IPR2016-00063 and IPR2016-00167, respectively, have been joined as Petitioners in the instant proceeding.

Director of the United States Patent and Trademark Office
c/o Office of the General Counsel
Madison Building East, 10B20
600 Dulany Street
Alexandria, VA 22314-5793

Patent Owner VirnetX Inc. (“VirnetX”) hereby amends its prior Notice of Appeal (Paper No. 123), filed on September 14, 2020, which noticed an appeal to the United States Court of Appeals for the Federal Circuit from the Final Written Decision on Remand entered on July 14, 2020 (Paper 122) (the “Final Written Decision”) by the United States Patent and Trademark Office, Patent Trial and Appeal Board (the “Board”), and from all underlying orders, decisions, rulings, and opinions, including, but not limited to, the Decision Granting In Part Patent Owner’s Motion for Additional Discovery, entered on October 23, 2019 (Paper 97) and the Decision Denying Patent Owner’s Request on Rehearing of Order Regarding Additional Discovery, entered on July 14, 2020 (Paper 121). With this amended notice of appeal, VirnetX further appeals to the United States Court of Appeals for the Federal Circuit from the Order entered on October 29, 2021 (Paper No. 126) by Andrew Hirshfeld, Commissioner for Patents, Performing the Functions and Duties of the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office, which denied VirnetX’s request for Director review of the Final Written Decision. Copies of the

Final Written Decision, the Decision Granting In Part Patent Owner's Motion for Additional Discovery, the Decision Denying Patent Owner's Request on Rehearing of Order Regarding Additional Discovery, and the Order denying VirnetX's request for Director review are attached.

In accordance with 37 C.F.R. § 90.2(a)(3)(ii), VirnetX indicates that the issues on appeal include, but are not limited to, whether the Board's use of joinder to consider new issues and evidence introduced by a joined party contravenes 35 U.S.C. § 315(c) and *Facebook, Inc. v. Windy City Innovations, LLC*, 973 F.3d. 1321 (Fed. Cir. 2020), the Board's interpretation and application of 35 U.S.C. § 315(b)-(c), the Board's denial of discovery sought by VirnetX, the Board's determination of unpatentability of claims 1, 2, 6-8, and 12-14 of U.S. Patent No. 7,490,151 under 35 U.S.C. § 102 and/or 35 U.S.C. § 103, and any findings or determinations supporting or related to those rulings including, without limitation, the Board's construction and application of the claim language, the Board's interpretation of the references, and the Board's interpretation of expert evidence. The issues on appeal further include whether Commissioner for Patents, Andrew Hirshfeld, as the Official Performing the Functions and Duties of the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office, was precluded from exercising the Director's review authority with respect to VirnetX's request by the Appointments Clause, *United*

States v. Arthrex, Inc., 141 S. Ct. 1970 (2021), or the Federal Vacancies Reform Act of 1998, 5 U.S.C. §§ 3345-3349c.

Simultaneous with this submission, a copy of this Amended Notice of Appeal is being filed with the Board. In addition, the Amended Notice of Appeal and the required fee are being filed electronically with the Clerk of Court for the United States Court of Appeals for the Federal Circuit.

Respectfully submitted this 3rd day of November, 2021.

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CERTIFICATE OF SERVICE

The undersigned certifies that, in addition to being filed electronically through Patent Trial and Appeal Board End to End (PTAB E2E), the original version of this Notice of Appeal was filed by overnight express delivery on November 3, 2021 with the Director of the United States Patent and Trademark Office, at the following address:

Office of the General Counsel
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, Virginia 22313-1450

The undersigned also certifies that a true and correct copy of this Notice of Appeal and the required fee were filed electronically via CM/ECF on November 3, 2021, with the Clerk of Court for the United States Court of Appeals for the Federal Circuit.

The undersigned also certifies that a true and correct copy of this Notice of Appeal was served on November 3, 2021 on counsel of record for Petitioners by electronic mail (by agreement of the parties) at the following addresses:

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THE MANGROVE PARTNERS MASTER FUND, LTD., APPLE INC.,
and BLACK SWAMP IP, LLC,
Petitioner,

v.

VIRNETX INC.,
Patent Owner.

IPR2015-01047¹
Patent 7,490,151 B2

Before MICHAEL P. TIERNEY, *Vice Chief Administrative Patent Judge*,
KARL D. EASTHOM, JASON W. MELVIN, *Administrative Patent Judges*.

MELVIN, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision on Remand
Determining All Challenged Claims Unpatentable
35 U.S.C. §§ 144, 318

¹ Apple Inc. and Black Swamp IP, LLC, which filed petitions in IPR2016-00063 and IPR2016-00167, respectively, have been joined as Petitioners in this proceeding.

I. INTRODUCTION

A. BACKGROUND AND SUMMARY

The Mangrove Partners Master Fund, Ltd., Apple Inc., and Black Swamp IP, LLC (collectively, “Petitioner”) requested *inter partes* review of claims 1, 2, 6–8, and 12–14 (the “challenged claims”) of U.S. Patent No. 7,490,151 B2 (“the ’151 patent”). Paper 2 (“Pet.”).² We issued a Decision instituting *inter partes* review. Paper 11 (“Inst. Dec.”).

After institution, VirnetX Inc. (“Patent Owner”) filed a Patent Owner’s Response (Paper 54 (redacted version), “PO Resp.”; Paper 48 (non-redacted version)), to which Petitioner replied (Paper 58 (redacted version); Paper 56 (non-redacted version), “Pet. Reply”; and Paper 59, “Pet. Separate Reply”). Oral argument was conducted on June 30, 2016. Transcripts of that argument have been made of record. Paper 79 (“Original Tr.”); *see also* Paper 78. Our Final Written Decision was issued September 9, 2016. Paper 80 (“Original Decision”).

On appeal, the Federal Circuit vacated our Original Decision and remanded the case for further proceedings. *VirnetX Inc. v. Mangrove Partners Master Fund, Ltd.*, 778 F. App’x 897 (Fed. Cir. 2019). After conferring with the parties, we permitted Patent Owner to file a Motion for Additional Discovery (Paper 90), to which Petitioner filed an Opposition (Paper 91) and Patent Owner filed a Reply (Paper 96). We granted in part Patent Owner’s Motion. Paper 97. Patent Owner requested rehearing of our decision on its Motion for Additional Discovery (Paper 101), to which Petitioner opposed (Paper 102) and Patent Owner replied (Paper 103).

² We consider the Petition filed by The Mangrove Partners Master Fund, Ltd., not the similar petitions filed by the joined parties.

We permitted the parties to brief the issues for consideration on remand from the Federal Circuit. Petitioner filed a principal brief (Paper 104, “Pet. Remand Br.”), Patent Owner filed an opposition (Paper 105, “PO Remand Br.”), Petitioner filed a reply (Paper 106, “Pet. Remand Reply”), and Patent Owner filed a sur-reply (Paper 107, “PO Remand Sur-Reply”). Oral argument was conducted on January 24, 2020, and a transcript appears in the record. Paper 115 (“Tr.”).

This is a final written decision as to the patentability of the challenged claims. For the reasons discussed below, we determine that Petitioner has shown by a preponderance of the evidence that the challenged claims are unpatentable.

B. RELATED MATTERS

The ’151 patent is at issue in the following civil actions: (i) Civ. Act. No. 6:13-cv-00211-LED (E.D. Tex.), filed February 26, 2013; (ii) Civ. Act. No. 6:12-cv-00855-LED (E.D. Tex.), filed November 6, 2012; and (iii) Civ. Act. No. 6:10-cv-00417-LED (E.D. Tex.), filed August 11, 2010. Pet. 1; Paper 8, 11–12.

The ’151 patent is the subject of Reexamination Control Nos. 95/001,697 and 95/001,714. Pet. 1–2; Paper 8, 2–3.

Petitioner additionally identifies the following:

On January 21, 2020, the Federal Circuit issued its opinion in *VirnetX Inc. v. Cisco Systems, Inc.*, No. 2019-1043 (Fed. Cir. Jan. 21, 2020), affirming, under Fed. Cir. R. 36, the Board’s decisions in *Cisco Systems, Inc. v. VirnetX Inc.*, Control No. 95/001,746, Appeal Nos. 2015-007843, 2017-010852, 2017-010852, each involving related U.S. Patent No. 6,839,759 and, *inter alia*, the Kiuchi reference at issue in this proceeding.

Paper 111.

Additionally, Patent Owner identifies a number of PTO proceedings that involve U.S. Patent No. 6,502,135 (“the ’135 patent”). Paper 8, 4. Of particular significance here, the ’135 patent is at issue in IPR2015-01046, which has been treated as largely a companion proceeding to the present one.

Patent Owner identifies multiple other proceedings involving “patents stemming from the same applications that led to the ’151 patent.” Paper 8, 3–10.

C. THE ’151 PATENT

The ’151 patent discloses a system and method for automatic creation of a virtual private network (VPN) in response to a domain-name server look-up function. Ex. 1001, 36:58–60.

D. ILLUSTRATIVE CLAIMS

Claim 1 of the ’151 patent is illustrative of the claimed subject matter and is reproduced below:

1. A data processing device, comprising memory storing a domain name server (DNS) proxy module that intercepts DNS requests sent by a client and, for each intercepted DNS request, performs the steps of:
 - (i) determining whether the intercepted DNS request corresponds to a secure server;
 - (ii) when the intercepted DNS request does not correspond to a secure server, forwarding the DNS request to a DNS function that returns an IP address of a nonsecure computer, and
 - (iii) when the intercepted DNS request corresponds to a secure server, automatically initiating an encrypted channel between the client and the secure server.

Ex. 1001, 46:55–67.

E. PRIOR ART AND ASSERTED GROUNDS

Petitioner asserts unpatentability on the following grounds:

Claims Challenged	35 U.S.C. §	Reference(s)
1, 2, 6–8, 12–14	102	Kiuchi ³
1, 2, 6–8, 12–14	103	Kiuchi, Rescorla ⁴
1, 2, 6–8, 12–14	103	Kiuchi, RFC 1034 ⁵
1, 2, 6–8, 12–14	103	Kiuchi, RFC 1034, Rescorla

Pet. 4.

F. CAFC REMAND

On appeal, the Federal Circuit held that our prior decision “relied on only the C-HTTP name server to perform the functions of the DNS proxy module.” *VirnetX*, 778 F. App’x at 906. The Court held that we had not identified substantial evidence “that the C-HTTP name server performs the functions of the claimed DNS proxy module.” *Id.* It further noted that we “could not have found that the client-side proxy corresponds to the claimed ‘client’ and is also a part of the DNS proxy module, as the claim makes clear that these are separate components.” *Id.*

³ Takahiro Kiuchi and Shigekoto Kaihara, “C-HTTP – The Development of a Secure, Closed HTTP-based Network on the Internet,” published by IEEE in the Proceedings of SNDSS 1996 (Ex. 1002).

⁴ E. Rescorla and A. Schiffman, “The Secure Hypertext Transfer Protocol,” Internet Draft (Feb. 1996) (Ex. 1004).

⁵ P. Mockapetris, Request for Comment (“RFC”) 1034, “Domain Names–Concepts and Facilities,” Nov. 1997 (Ex. 1005).

Regarding how the claimed “client” mapped to Kiuchi’s disclosures, the Federal Circuit held that our prior decision had inconsistencies in various parts of its analysis. *Id.* at 907–08. Attempting to resolve that inconsistency, the Court held that relying exclusively on Kiuchi’s client-side proxy for the claimed “client” would require resolving a claim-construction dispute over the meaning of that term. *Id.* at 908.

Finally, the Federal Circuit held that we should consider Petitioner’s obviousness challenges anew in light of the Court’s decision. *Id.*

II. ANALYSIS

A. CLAIM CONSTRUCTION

In a Board proceeding based on a petition filed before November 13, 2018, as here, claims in an unexpired patent are interpreted according to their broadest-reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b) (2018); *see Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016).⁶

The Federal Circuit held that, “[t]o the extent the Board intended to rely exclusively on Kiuchi’s client-side proxy for the claimed ‘client,’” it would be necessary to construe the meaning of “client.” *VirnetX*, 778 F. App’x at 907–08. The parties dispute that construction, along with the construction of “between.”

⁶ A recent amendment to this rule does not apply here because the Petition was filed before November 13, 2018. *See Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51,340 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b), effective Nov. 13, 2018) (codified at 37 C.F.R. § 42.100(b) (2019)).

1. “*client*”

As to the proper construction of “client,” Petitioner submits that its “anticipation argument does not implicate this issue—there, the user agent is the ‘*client*’” Pet. Remand Br. 6. As noted below, because we find claims 13 and 14 anticipated by Kiuchi and all claims obvious over Kiuchi and Rescorla, we do not reach Petitioner’s obviousness contentions regarding RFC 1034. *See infra* at 28. Construing “client” in this proceeding would therefore have no impact on our judgment—it would only influence a ground we do not reach. In copending IPR2015-01046, we construe “client computer.” *See* IPR2015-01046, Paper 106. We note here that we would reach the same construction for “client” as “client computer” in that proceeding, as the parties treat the terms as essentially synonymous. Pet. Remand Br. 7 n.2.⁷

2. “*between the client and the secure server*”

Each independent challenged claim includes a phrase requiring an element between two points—claims 1 and 7 recite “initiating an encrypted channel between the client and the secure server” and claim 13 recites “creating a secure channel between the client and the secure server.”

Patent Owner submits that the district court correctly construed such phrases as “extending from [A] to [B].” PO Remand Br. 9–10 (citing Ex. 2031, 25–26). Patent Owner notes that construing this term was not required for the prior decision in this case, which considered Kiuchi’s client-side and server-side proxies as the two relevant endpoints. *Id.* at 10 n.4.

⁷ In the related proceeding, we construe “client computer” as “user’s computer.” IPR2015-01046, Paper 106.

Petitioner contends that the broadest-reasonable construction applies and that we should adopt the construction Patent Owner sought before the district court, that “[s]ecurity—i.e., encryption—is only necessary for public communication paths for the security objective of the patents to be met because security can be inherently present on private portions of the path.” Pet. Remand Br. 9–10 (quoting Ex. 1009, 10). According to Petitioner, that construction must be consistent with the broadest-reasonable construction because Patent Owner offered it to the district court. *Id.* at 10.

Petitioner does not offer any substantive basis to adopt a construction other than Patent Owner’s proposed construction. The plain and ordinary meaning of the claim language supports Patent Owner’s proposed construction, and we apply it here—between the client and the secure server means extending from the client to the secure server, not simply a piece of the way between the two.

B. ANTICIPATION

Petitioner illustrates its mapping of the claim language to Kiuchi’s disclosures using the following annotated version of a diagram appearing in Petitioner’s expert declaration of Dr. Guerin:

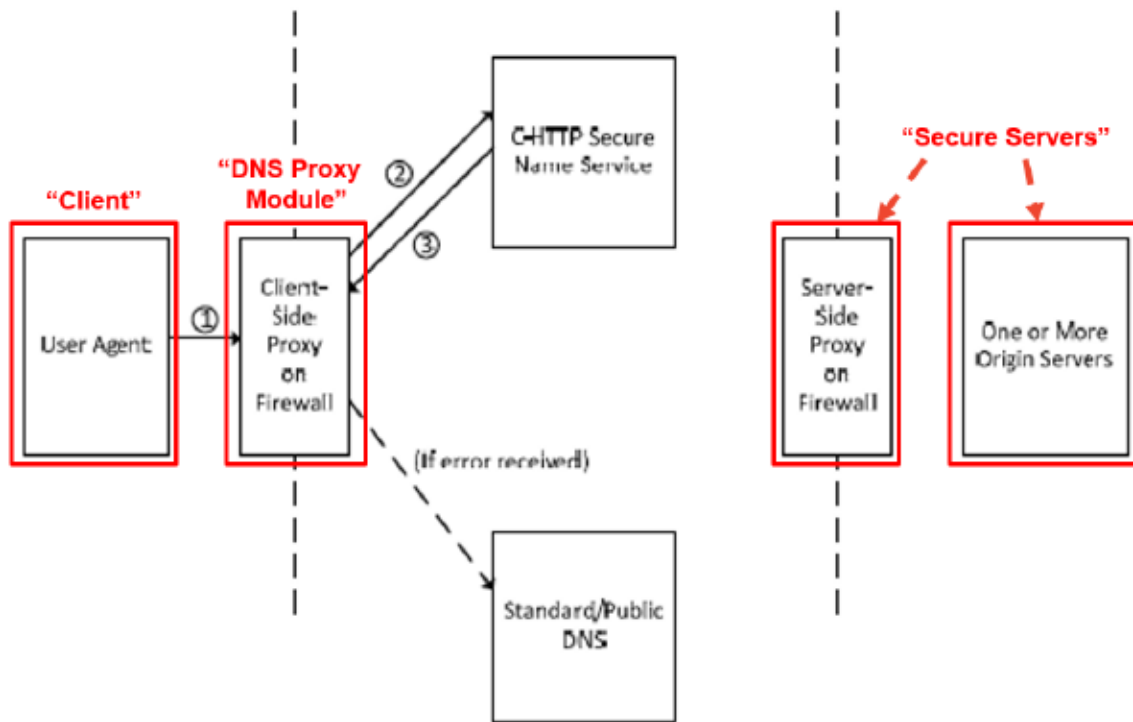


Diagram 3

Pet. Remand Br. 11 (annotating Ex. 1003 ¶ 24; Pet. 25–37). The annotated diagram is not itself evidence, but helps illustrate Petitioner’s contentions.

Kiuchi discloses systems and methods for facilitating “secure HTTP communication mechanisms within a closed group of institutions on the Internet, where each member is protected by its own firewall.” Ex. 1002, 64 (Abstract). It terms its approach C-HTTP, indicating “a closed HTTP (Hypertext Transfer Protocol)-based network (C-HTTP).” *Id.*

C-HTTP allows a conventional user agent (such as web browser software) to request a resource identified in a URL. *Id.* at 65 (§ 2.3). A client-side proxy intercepts all such resource requests made by a user agent. *Id.* (“A client-side proxy behaves as an HTTP/1.0 compatible proxy, and it should be specified as a proxy server for external (outside the firewall) access in each user agent within the firewall.”). The “client-side proxy asks

the C-HTTP name server whether it can communicate with the host specified in a given URL.” *Id.* “If the connection is permitted, the C-HTTP name server sends the IP address and public key of the server-side proxy” to the client-side proxy. *Id.* If, on the other hand, connection from the client-side proxy to the appropriate server-side proxy is not permitted, the C-HTTP name server sends the client-side proxy a status code that indicates an error. *Id.* In that event, the client-side proxy “performs DNS lookup, behaving like an ordinary HTTP/1.0 proxy.” *Id.*

When connection is permitted, the client-side proxy and server-side proxy negotiate details and establish an encrypted connection between them, over which the user agent’s request is passed. *Id.* at 66. The “server-side proxy communicates with an origin server inside the firewall” such that, “[f]rom the view of the user agent or client-side proxy, all resources appear to be located in a server-side proxy on the firewall.” *Id.*

Petitioner asserts that Kiuchi’s user agent, acting as the claimed client, generates a request for content corresponding to a hostname in a URL. Pet. Remand Br. 10 (citing Pet. 25–28); *see also id.* at 6 (“Petitioners’ anticipation argument does not implicate this issue—there, the user agent is the ‘*client.*’”).

Petitioner asserts that Kiuchi discloses “determining whether the intercepted DNS request corresponds to a secure server.” Kiuchi’s client-side proxy intercepts a user agent’s requests and uses the C-HTTP name server to determine whether requested content corresponds to an origin server reachable through a server-side proxy. *Id.* (citing Pet. 28–29). Thus, Petitioner asserts that the client-side proxy, working with the C-HTTP name server, acts as the claimed DNS proxy module. *Id.*; Pet. 25 (citing Ex. 1003

¶¶ 18, 20–21) (“client-side proxy – working in concert with the C-HTTP name server – is a domain name server (DNS) proxy module that intercepts DNS requests sent by a user agent acting as a client”).

Petitioner asserts that Kiuchi discloses “when the intercepted DNS request corresponds to a secure server, . . . automatically initiating an encrypted channel between the client and the secure server.” If the requested content corresponds to a server-side proxy and origin server, Kiuchi’s client-side proxy establishes a connection with the origin server through the server-side proxy. Pet. Remand Br. 10–12 (citing Pet. 29–32).

Petitioner asserts that Kiuchi discloses “when the intercepted DNS request does not correspond to a secure server, forwarding the DNS request to a DNS function that returns an IP address of a nonsecure computer.” If the requested content does not require such a connection, the client-side proxy forwards the request to a conventional DNS server for resolution. *Id.* at 10–13.

Patent Owner disputes several aspects of Petitioner’s contentions.

1. Kiuchi discloses “forwarding the DNS request to a DNS function”

When Kiuchi’s client-side proxy (which, together with the C-HTTP name server, maps to the claimed “DNS proxy module”) receives an error response from the C-HTTP name server (indicating the client’s request does not correspond to a secure server) it “performs DNS lookup, behaving like an ordinary HTTP/1.0 proxy.” 1002, 65 (§ 2.3). Petitioner submits that Kiuchi therefore discloses “when the intercepted DNS request does not correspond to a secure server, forwarding the DNS request to a DNS function that returns an IP address of a nonsecure computer.” Pet. 29–30 (quoting Ex. 1002, 65 (§ 2.3)).

Patent Owner challenges that conclusion, arguing that “there is no disclosure of any forwarding of the DNS request to a DNS function.” PO Remand Br. 14. In that regard, Patent Owner relies on a statement by the Federal Circuit that Kiuchi’s C-HTTP name server does not, alone, meet the claim requirement. *VirnetX*, 778 F. App’x at 906–07. Because the Court was not addressing functionality of the combined client-side proxy and C-HTTP name server, this statement does not undermine Petitioner’s asserted combination on which we rely. Indeed, the client-side proxy alone forwards the DNS request to a DNS function when it determines (in conjunction with the C-HTTP name server) that the request does not correspond to a secure server.

Patent Owner argues also that simply accessing a DNS function falls short of forwarding a received DNS request to a DNS function, making the distinction between generating a new request and forwarding a received request. PO Remand Sur-Reply Br. 11–12. In Patent Owner’s view, Kiuchi is silent on the details of the interaction and thus cannot anticipate the challenged claims. *Id.* We do not agree, because Kiuchi’s statement that the client-side proxy behaves “like an ordinary HTTP/1.0 proxy” to perform DNS lookup indicates that the client-side proxy passes on a request already received.

Moreover, continues Patent Owner, to the extent Kiuchi addresses the issue, it explains that it uses C-HTTP name service “instead of DNS.” *Id.* at 12 (quoting Ex. 1002, 7 (“In a C-HTTP-based network, instead of DNS, a C-HTTP based secure, encrypted name and certification service is used.”)). We do not agree. Kiuchi’s statement that it uses its C-HTTP name service instead of DNS does not mean all aspects of Kiuchi’s system use a different

format from DNS. Rather, the client-side proxy handling all “external (outside the firewall) access” for user agents within the firewall is consistent with Kiuchi’s user agents using standard DNS-formatted requests. Ex. 1002, 65 (§ 2.3); *see* Ex. 1003 ¶ 22 (citing Ex. 1002, 65 (§ 2.3)). Moreover, the format of Kiuchi’s C-HTTP requests is not at issue because the claim limitation relates to requests for resources outside the secure system—those for which the C-HTTP name server returns an error. *See* Ex. 1002, 66 (§ 2.3). In such cases, Kiuchi’s client-side proxy “performs DNS lookup, behaving like an ordinary HTTP/1.0 proxy.” *Id.* at 65 (§ 2.3). Kiuchi further indicates that nonsecure requests use standard DNS, as it discloses that an alternative service “is used for the C-HTTP-based network,” not for all requests. *Id.* at 64 (§ 2.1).

We find that the claim language reads on Kiuchi’s disclosure of the client-side proxy “behaving like an ordinary HTTP/1.0 proxy” to perform a DNS lookup. As Petitioner points out, Kiuchi’s client-side proxy receives from the client (user agent) a request that contains a URL specifying a hostname. Ex. 1002, 65 (§ 2.3); Pet. 25–28; Pet. Remand Br. 10. Behaving like an ordinary proxy to perform the DNS lookup means that the client-side proxy will send the DNS request to a public DNS server. Pet. 30 (citing Ex. 1003 ¶ 23; Ex. 1002, 65 (§ 2.3)). Against the evidence supporting Kiuchi’s operation for nonsecure connections, Patent Owner has not shown that Kiuchi’s client-side proxy in any way reformats or restructures requests from the user agent.

Accordingly, based on a preponderance of the evidence, we find Kiuchi discloses “when the intercepted DNS request does not correspond to

a secure server, forwarding the DNS request to a DNS function,” as recited in independent claims 1, 7, and 13.

2. *Kiuchi discloses “determining whether the intercepted DNS request corresponds to a secure server”*

Petitioner asserts that Kiuchi’s client-side proxy and C-HTTP name server, acting together, determine whether the intercepted DNS request corresponds to a secure server. Reply 8–9. That argument is consistent with the Petition’s assertion that Kiuchi’s client-side proxy makes the determination “by asking ‘the C-HTTP name server whether it can communicate with the host specified in a given URL.’” Pet. 28–29 (quoting Ex. 1002, 65 (§ 2.3); citing Ex. 1003 ¶¶ 23–24, 26). Patent Owner challenges Petitioner’s mapping, arguing that Petitioner relies on the C-HTTP name server alone and that its operation cannot be “imputed to the client-side proxy.” PO Remand Br. 14–15.

Petitioner’s mapping of the claimed functionality to two devices in Kiuchi is consistent with the ’151 patent’s description. The Specification discloses that functionality may be located in a single computer or may instead be distributed among multiple computers. *See* Ex. 1001, 38:30–50 (“DNS proxy 2610 returns to user computer 2601 the resolved address passed to it by the gatekeeper Gatekeeper 2603 can be implemented on a separate computer (as shown in FIG 25) or as a function within modified DNS server 2602. . . . It will be appreciated that the functions of DNS proxy 2610 and DNS server 2609 can be combined into a single server for convenience. . . . [A] check [whether the user is authorized to connect to the secure host] can be made by communicating with gatekeeper 2603”), Fig. 26.

Patent Owner disputes such reliance on the specification, arguing the specification's flexibility relates only to "a determination of whether a user has sufficient authorization," not to "whether the intercepted request corresponds to a secure host." PO Remand Sur-Reply 13. The Specification is not so constrained. When discussing how the DNS proxy "determines whether access to a secure site has been requested," it discloses that the determination may be made "for example, by a domain name extension, or by reference to an internal table of such sites." Ex. 1001, 37:60–65. The use of "for example," along with the flexible description of various DNS proxy, DNS server, and gatekeeper functions noted above, supports that the claims are not limited to a particular arrangement of hardware. Kiuchi's client-side proxy using information returned from the C-HTTP name server is consistent with the '151 patent's description.

Further, in Petitioner's mapping of the claim language to Kiuchi's disclosures, Petitioner does not rely on the C-HTTP name server as performing any other aspect of the claims. *See* Pet. 25–32; Pet. Remand Br. 10–13. Thus, Petitioner does not attempt to use the C-HTTP name server as an element corresponding to multiple claim limitations. *See VirnetX*, 778 Fed. App'x at 906 ("The Board could not have found that the client-side proxy corresponds to the claimed 'client' and is also a part of the DNS proxy module, as the claim makes clear that these are separate components.").

Accordingly, based on a preponderance of the evidence, we find Kiuchi discloses its client-side proxy acting with the C-HTTP name server as the claimed DNS proxy module "determining whether the intercepted

DNS request corresponds to a secure server,” as recited in independent claims 1, 7, and 13.⁸

*3. Kiuchi discloses “a secure channel
between the client and the secure server”
but not “an encrypted channel . . .”*

Petitioner asserts that, when the user agent requests a resource on an available origin server, “the client-side proxy initiates an encrypted channel on public communication paths between the user agent and the origin server (i.e., the communication path over the Internet between the client-side proxy and the server-side proxy).” Pet. 31 (citing Ex. 1003 ¶¶ 28, 31). Petitioner does not assert, however, that Kiuchi discloses an encrypted connection between its user agent and client-side proxy. *See* PO Remand Br. 15–16.

As Patent Owner argues, an encrypted channel between only the client-side and server-side proxies does not satisfy the requirement of claims 1 and 7 for an encrypted channel *between the client and the secure server*.

Based on the ordinary meaning of the claimed “between” phrases in claims 1 and 7, we agree with Patent Owner that Kiuchi does not disclose encryption extending from the user agent to either the server-side proxy or the origin server. PO Remand Sur-Reply Br. 14; *see supra* at 8.

We reach a different conclusion, however, for claim 13, which requires only a “secure” connection rather than the “encrypted” connection of claims 1 and 7. The Petition relies on Kiuchi’s disclosure of encrypting C-HTTP connections between client-side and server-side proxies. Pet. 34 (citing Ex. 1002, 64 (Abstract), 65). It is undisputed that the link between

⁸ The variation in claim 13’s language for this limitation does not affect our analysis.

Kiuchi's client-side proxy and server-side proxy is encrypted, and thus secure. Patent Owner disputes whether Petitioner has adequately shown that communications between the user agent and client-side proxy or communications between the server-side proxy and origin server are secure.

The Petition asserts that when a server-side proxy receives a request for connection, it "verifies that the client-side proxy is a member of the closed network." Pet. 34 (citing Ex. 1002, 65 (§§ 2.2, 2.3); Ex. 1003 ¶¶ 26–28). Further, the Petition points out that Kiuchi permits secure communication "within a closed group of institutions on the Internet, where each member is protected by its own firewall." *Id.* at 17 (citing Ex. 1002, 64 (Abstract)); *accord* Tr. 6:9–11; *see also* Pet. 25 (showing Kiuchi's "C-HTTP connection 'provides [a] secure HTTP communication mechanisms' in which communications over the C-HTTP connection are encrypted." (quoting Ex. 1002, 64–66)).

Beyond Kiuchi's disclosures, Petitioner relies on the Federal Circuit's recognition in an earlier case that Patent Owner's "expert testified that one of ordinary skill would understand that the path extending from the VPN server to the target computer, i.e., within the private network, would be secure and anonymous owing to protection provided by the private network." *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1321 (Fed. Cir. 2014); *see* Pet. Remand Reply 17–18; Tr. 6:12–19. Patent Owner contests such reliance, pointing out that its expert testified the accused network was secure both because it had a firewall and because it had "been physically secured." PO Remand Sur-Reply 14 (quoting *VirnetX*, 767 F.3d at 1321).

We find that a preponderance of the evidence shows that Kiuchi discloses “a secure channel between the client and the secure server.” The Specification states that “[i]t is desired for the communications to be secure, that is, immune to eavesdropping.” Ex. 1001, 1:34–35. Based on that disclosure, we understand “secure” to be used consistently with its plain and ordinary meaning, rather than imparting some particularized meaning.

Kiuchi discloses that “in-hospital networks are usually protected using a dual home gateway and packet filter (firewall) and the Internet can only be accessed through proxies on the firewalls.” Ex. 1002, 67 (§ 4.2). Further, Kiuchi discloses that it “provides secure HTTP communication mechanisms within a closed group of institutions on the Internet, where each member is protected by its own firewall.” *Id.* at 64 (Abstract).

Patent Owner argues a firewall is insufficient to secure network communications. *See* PO Remand Sur-Reply 14. We do not agree. As noted above, the record does not support limiting the claim to such a strict application of “secure.”

Thus, we agree Kiuchi discloses a “secure channel between the client and the secure server” because data in Kiuchi’s C-HTTP network is encrypted when sent over public segments of the network path and protected using firewalls when sent over private segments.⁹ Pet. Remand Reply 10.

⁹ Though not critical to our conclusion, the testimony of Petitioner’s declarant, Dr. Guerin, supports the conclusion that Kiuchi discloses a secure network. Ex. 1003 ¶¶ 17, 29 (“Communications between the user agent and the client-side proxy as well as those between the original server [sic] and the server-side proxy are behind the firewall of their respective site, and therefore protected. This, together with the security afforded by the encrypted C-HTTP connection over the public communication path between the client-side proxy and the server-side proxy, ensures that

4. *Additional claims*

As discussed above, Kiuchi discloses the limitations of claim 13. Patent Owner does not provide additional arguments in support of claim 14 with respect to Kiuchi's disclosures. PO Resp. 25–26; PO Remand Br. 10–25. We have reviewed Petitioner's contentions and determine that, on this record, for the reasons given by Petitioner, a preponderance of the evidence shows that claim 14 is unpatentable over Kiuchi. *See* Pet. 35–37.

5. *Summary*

Having considered the parties' evidence and argument, we find that a preponderance of the evidence shows that Kiuchi discloses the limitations of claims 13 and 14. We find that a preponderance of the evidence does not show that Kiuchi discloses the limitations of claims 1 or 7, and therefore that Petitioner has not proven unpatentability of claims 1, 2, 6–8, or 12.

C. OBVIOUSNESS OVER KIUCHI AND RESCORLA

Rescorla is an Internet Draft, a working document of the Internet Engineering Task Force that describes "The Secure HyperText Transfer Protocol," or S-HTTP. Ex. 1004, 1. As it describes, "Secure HTTP (S-HTTP) provides secure communication mechanisms between an HTTP client-server pair." *Id.* at 5. Petitioner relies on Rescorla's description that "[s]everal cryptographic message format standards may be incorporated into S-HTTP clients and servers" and that "S-HTTP provides full flexibility of cryptographic algorithms, modes and parameters." Pet. 39–40 (quoting Ex. 1004 § 1.1).

communications between the user agent and the origin server are over a secure channel.") (citation omitted) (citing Ex. 1002, 64).

1. Rescorla qualifies as prior art

Patent Owner contests Petitioner’s assertions, arguing that Rescorla “does not qualify as a printed publication, and thus cannot be used in an obvious combination.” PO Remand Sur-Reply 15; *accord* PO Resp. 41–42. According to Patent Owner, “a work is not publicly accessible if the only people who know how to find it are the ones who created it.” PO Remand Sur-Reply 15–16 (quoting *Samsung Elecs. Co. v. Infobridge Pte. Ltd.*, 929 F.3d 1363, 1372 (Fed. Cir. 2019)). In Patent Owner’s view, Petitioner has not adequately shown that the relevant group knew how to find Rescorla. *Id.* at 16 (“Petitioners introduced no evidence that those outside of the RFC development process would have known how to find Rescorla.”). Patent Owner asserts that Internet Drafts, while developed for “eventual publication as an RFC,” were limited to those developing the draft. *Id.*

Petitioner presents adequate evidence of Rescorla’s public availability. Reply 19–21; *see Samsung Elecs.* 929 F.3d at 1374 (“Our cases have consistently held that the standard for public accessibility is whether a person of ordinary skill in the art *could*, after exercising reasonable diligence, access a reference.”). Resorla’s face indicates a February 1996 date. Ex. 1004, 1. It states that it is an Internet-Draft, which is a “working document[] of the Internet Engineering Task Force (IETF).” *Id.* Rescorla discloses that prior drafts were “distributed” and “published.” *Id.* As we found in an earlier order, RFC documents, on their face, show that they “are prepared and distributed, are for others to provide comments, are published on a specific date, and that the top right corner of such documents specify a date.” Paper 83, 7.

Additionally, RFC 2026 supports the process used for Internet Drafts. Ex. 1010, 8.¹⁰ As RFC 2026 states, placing Internet Drafts such as Rescorla on multiple public servers “makes an evolving working document readily available to a wide audience.” *Id.* That wide availability is consistent with Rescorla, which notes that people at multiple institutions reviewed earlier drafts, supporting both dissemination and availability of documents throughout the process. Ex. 1004, 91.

Additionally, Kiuchi refers to an earlier version of Rescorla. Ex. 1002, 70.¹¹ Patent Owner argues that the URL Kiuchi cites is “not the same URL that’s actually on Rescorla.” Tr. 31:12–14. Even so, Kiuchi supports Rescorla’s public availability—Kiuchi’s reference to Rescorla’s predecessor draft shows it was likely people other than “the ones who created” Rescorla knew how to find it. *See Samsung*, 929 F.3d at 1372. The record supports that artisans reading Kiuchi were aware of Internet Drafts and had specific reason to follow Rescorla’s development.

Thus, Rescorla was publicly accessible to the relevant group of skilled artisans.¹² Based on the totality of evidence in the record, we have evaluated

¹⁰ We recognize that RFC 2026 was published after Rescorla. *See* PO Resp. 41. But given the relatively close time of the two documents, we view RFC 2026 as evidence regarding how Internet Drafts were disseminated.

¹¹ Patent Owner argues that Petitioner raises a new argument by relying on Kiuchi to support Rescorla’s public availability. Tr. 30:26–31:2; *but see* Pet. 39 (“Kiuchi expressly refers to an earlier Internet-Draft published as part of the development of RFC 2660.”); Ex. 1024 (Rescorla, E. and A. Schiffman, “The Secure HyperText Transfer Protocol,” RFC 2660, August 1999.).

¹² Indeed, the record shows Internet Drafts were shared among “the Internet community for the standardization of protocols and procedures,” and thus

Petitioner's evidence against Patent Owner's evidence and argument, and we find by a preponderance of evidence that Rescorla was publically accessible as of its February 1996 date.

2. *Skilled artisans had reason to modify Kiuchi based on Rescorla*

Petitioner asserts that a skilled artisan would have had reason to modify Kiuchi's system in light of Rescorla and would have considered the challenged claims obvious. Pet. 37–41. Petitioner submits that skilled artisans had reason to look to Rescorla's teachings in light of Kiuchi's disclosure that C-HTTP "can co-exist with" other secure HTTP proposals and that, "[a]lthough the current C-HTTP implementation assumes the use of HTTP/1.0 compatible user agents and servers, it is possible to develop C-HTTP proxies which can communicate with other secure HTTP compatible user agents and servers." Pet. 38–39 (quoting Ex. 1002, 69 (§ 4.4)) (citing Ex. 1003 ¶ 33). Moreover, Petitioner points out, Kiuchi expressly refers to an earlier Internet Draft in Rescorla's line of development. Pet. 39 (citing Ex. 1002, 69–70 (Reference 12: "Rescorla E., Schiffman A. The Securer Hypertext Transfer Protocol, Internet Draft, 1995 (Work in progress, available on the World Wide Web as 'ftp:ds.internic.net/internet-drafts/draftietf-wts-shttp-00.txt'")))).

Petitioner asserts that modifying Kiuchi's system with Rescorla's teachings "would result in encrypted communications between the user agent and origin server using S-HTTP messages instead of standard HTTP/1.0 messages." Pet. 40 (citing Ex. 1003 ¶ 34). Using S-HTTP for

embrace the nature of publishing for collaboration. *See Samsung*, 929 F.3d at 1372 ("To hold otherwise would disincentivize collaboration and depart from what it means to *publish* something").

communications “would ensure end-to-end encryption between the user agent and origin server” and thereby enhance security by adding “personal-level security.” *Id.* at 40–41 (citing Ex. 1003 ¶ 35).

Patent Owner asserts that Kiuchi’s and Rescorla’s approach are incompatible and that Kiuchi discourages end-to-end encryption. PO Remand Sur-Reply 16–17. That argument was not raised in the Patent Owner Response or Patent Owner’s Remand Opposition; thus, it was waived.^{13,14} *See* Paper 12 (“The patent owner is cautioned that any arguments for patentability not raised in the response will be deemed waived.”).

Moreover, we agree with Petitioner that skilled artisans had reason to use Rescorla’s teachings in conjunction with Kiuchi. For the reasons provided above, we find that making the asserted combination would have been “the mere application of a known technique to a piece of prior art ready for the improvement.” *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007). The record does not support that the combination of Kiuchi and

¹³ Patent Owner argued in the Response that “Kiuchi discourages end-to-end encryption” and “because encryption does not extend to Kiuchi’s user agent, Kiuchi does not disclose an ‘encrypted channel between the user agent and the origin server via the server side proxy,’ as claimed.” PO Resp. 18; *accord* PO Remand Br. 16. Those arguments about what Kiuchi teaches were not applied to whether skilled artisans would have combined Rescorla’s teachings with Kiuchi’s. *See* PO Resp. 27–28.

¹⁴ Even considering the argument, Kiuchi’s statement that its approach is “fundamentally different from” “[o]ther secure HTTP protocols” such as those described in Rescorla (Ex. 1002, 66–67) does not discourage using both together. Kiuchi’s assertions of “the following enhancements for security protection” (*id.* at 68) do not mandate that a skilled artisan would necessarily adopt Kiuchi unchanged.

Rescorla would have been unpredictable. Thus, the record shows that Rescorla's technique for end-to-end encryption would improve Kiuchi's system just as it was used in Rescorla. *See id.* (“[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.”).

Other than as discussed above, Patent Owner does not contest the combination of Kiuchi and Rescorla. *See* PO Resp. 27–28.¹⁵

3. *Patent Owner's asserted objective indicia of nonobviousness are not persuasive*

Patent Owner asserts that objective indicia of nonobviousness support a conclusion of patentability. PO Resp. 29–36. Patent Owner asserts that Apple's market success supports nonobviousness of the patented invention through commercial success, because a jury found Apple to infringe the '151 patent. PO Resp. 33. As Patent Owner points out, “success of an infringing product is considered to be evidence of the commercial success of the claimed invention.” *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000). Although Petitioner challenges Patent Owner's reliance on its declarant Dr. Short, as discussed below,

¹⁵ Patent Owner argued Petitioner belatedly raises “mapping No. 2 in their obviousness argument” and that the Petitioner only maps “the client side proxy to the origin server.” Tr. 30:9–10; *but see* Pet. 38 (asserting that Rescorla buttresses Kiuchi's teachings regarding a “channel that extends from the client to the secure server rather than just an intermediate portion there-between”), 41 (identifying a “channel that starts at the user agent (acting as a client) and ends at the origin server (a secure server)”).

Petitioner does not address Patent Owner's reliance on the jury's infringement finding. *See* Reply 17.

Patent Owner points out that the jury's damages award exceeded \$625 million, but does not address that the case included two additional patents. *See* Ex. 2052. More significantly, however, Patent Owner does not provide evidence allowing us to understand how the jury's damages award relates to the overall industry—the record does not reflect the scope of that industry or Apple's place within it. *Cf. In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996) (noting that “evidence related solely to the number of units sold provides a very weak showing of commercial success, if any”). Thus, Patent Owner's evidence at most weakly shows commercial success of the patented invention.

Patent Owner's other assertions rely on a declaration from Dr. Short, Ex. 2050. *See* PO Resp. 29–36. But Patent Owner did not make Dr. Short available for cross examination in this proceeding, and we therefore afford his declaration little to no weight. *See* Ex. 2060, 12:18–13:3, 19:17–20. As discussed in the Original Decision, Patent Owner does not establish the required factual support for its asserted indicia of nonobviousness. Original Decision 16–24.

In light of the minor modification Petitioner proposes to Kiuchi's system based on Rescorla's teachings, Patent Owner's evidence of Apple's commercial success does not outweigh the evidence of obviousness. *See Lectrosonics Inc. v. Zaxcom, Inc.*, IPR2018-00972, Paper 41, 23–24 (“Ultimately, the fact finder must weigh the secondary considerations evidence presented in the context of whether the claimed invention as a

whole would have been obvious to a skilled artisan.” (citing *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1331-32 (Fed. Cir. 2016))).

Patent Owner’s assertions of nonobvious, considered together with the evidence of commercial success, similarly fail to persuade us that the claimed invention would not have been obvious over Kiuchi and Rescorla.

4. *Additional Claims*

As discussed above, the combination of Kiuchi and Rescorla directly remedies the deficiency with Kiuchi’s disclosure regarding an encrypted channel between the client and the secure server. Thus, the combination of Kiuchi and Rescorla renders obvious claims 1 and 7. The combination renders obvious claim 13 also because applying Rescorla’s methods to claim 13 would not undermine any of Kiuchi’s disclosures that support anticipation; if anything, Rescorla’s methods would further support creation of a secure channel between the client and the secure server.

Claim 2 recites determining whether the client is authorized to access the secure server. Patent Owner argues that Kiuchi only discloses “checking whether” a server “is registered in the network” but fails to disclose determining whether a client is “authorized” to access the secure server, as recited in claim 2, because “whether the server-side proxy [of Kiuchi] is permitted to connect says nothing as to the client computer’s authorization.” PO Resp. 26. However, Patent Owner does not assert or demonstrate sufficiently a difference between (1) determining if a device is “permitted” to connect (as disclosed by Kiuchi) and establishing a connection between a client and the server only if the device is determined to be “permitted” to connect and (2) determining if the client is “authorized” to access the secure server. One of skill in the art would have understood that a client determined

to be “permitted to connect” is also determined to be “authorized” to connect. Otherwise, the client would not be permitted to connect with the server, which would be contrary to the determination that the device is “permitted to connect.”

Patent Owner does not provide additional arguments in support of claims 6–8 or 12–14 with respect to Kiuchi’s disclosures. PO Resp. 25–26; PO Remand Br. 10–25. We have reviewed Petitioner’s contentions and determine that, on this record, for the reasons given by Petitioner, a preponderance of the evidence shows that claims 2, 6, 8, 12, and 14 are unpatentable. *See* Pet. 35–37.

5. Summary

Kiuchi discloses all elements of claims 1 and 7 other than “an encrypted channel between the client and secure server.” *See supra* at 8–19. Considering Kiuchi’s disclosures together with Rescorla’s methods for encrypted S-HTTP communication renders the entire subject matter of each claims 1 and 7 obvious, along with that of claim 13. Skilled artisans had reason, as Petitioner explains, to combine Rescorla’s teachings with Kiuchi’s to result in the claimed system. Petitioner has also shown that Kiuchi discloses the additional limitations of dependent claims 2, 6, 8, 12, and 14. *See* Pet. 35–37.

Accordingly, Petitioner has shown by a preponderance of the evidence that claims 1, 2, 6–8, and 12–14 are unpatentable as obvious over Kiuchi and Rescorla.

D. OBVIOUSNESS OVER KIUCHI AND RFC 1034

Petitioner's obviousness contentions include modifying Kiuchi based on RFC 1034, with or without Rescorla. Pet. Remand Br. 15–27. Because we conclude the challenged claims are unpatentable as either anticipated by Kiuchi or rendered obvious by Kiuchi and Rescorla alone, we do not reach Petitioner's ground based on Kiuchi and RFC 1034.

E. DR. GUERIN'S DECLARATION

Patent Owner argues that we should not afford Dr. Guerin's declaration (Exhibit 1003) any weight because "it was altered by counsel after he signed it." PO Remand Br. 25 (citing PO Resp. 37–39; Paper 82, 11–14). As we noted in an earlier Decision on Request for Rehearing, "[w]e note that Exhibit 1003 merely confirms what is already apparent in the Petition and/or the Kiuchi reference itself." Paper 83, 6. We reached the same conclusion as to public availability of RFC documents—that our conclusion did not turn on Dr. Guerin's declaration. *Id.* at 6–7.

We reach the same conclusion here. Dr. Guerin's declaration does not drive our conclusion on any disputed issue. Additionally, Patent Owner has not demonstrated that any relevant modifications were made without Dr. Guerin's agreement. Thus, Patent Owner's argument is not persuasive.

F. TERMINATION UNDER § 315(B)

Patent Owner argues that this proceeding should be terminated under 35 U.S.C. § 315(b) in light of Apple's joinder to the proceeding. PO Remand Br. 29–30. As Patent Owner recognizes, however, the Federal Circuit rejected this argument as raised in the first appeal. *VirnetX*, 778 F. App'x at 901. Because the Federal Circuit left open whether prejudice could arise

later (*see id.* at 902), Patent Owner “continues to object” because “Apple’s counsel continued to assume a leading role” in the proceedings. PO Remand Br. 29–30. We determine that Patent Owner has not identified any material change in the case due to Apple’s participation and decline to terminate based on § 315(b).

G. CONSTITUTIONALITY

Patent Owner raises an argument relying on *Arthrex, Inc. v. Smith & Nephew, Inc.*, 941 F.3d 1320 (Fed. Cir. 2019). PO Remand Br. 29. That argument, however, is not sufficiently explained and attempts to incorporate by reference to Patent Owner’s other papers. *See id.* Our rules prohibit such incorporation and considering Patent Owner’s arguments from the referenced papers would violate the word limit applicable to Patent Owner’s remand brief. *See* 37 C.F.R. § 42.6(a)(3) (2019).

In any event we see little merit to Patent Owner’s Appointment’s Clause challenge. Even apart from the fact the interlocutory discovery order issued by the panel in this case was not a final agency action, Patent Owner waived any such challenge by not raising it before the agency or the Federal Circuit during the original appeal of this case. *See Vivint, Inc. v. Alarm.com Inc.*, Fed. Cir. Nos. 19-2438, -2439, ECF No. 29 at 2 (holding that Vivint’s failure to raise an Appointments Clause challenge in its original appeal forfeited its ability to do so after remand because it did not “‘timely raise[]’ its challenge ‘before the first body capable of providing it with the relief sought’”) (quoting *Arthrex, Inc. v. Smith & Nephew, Inc.*, 941 F.3d 1320, 1339 (Fed. Cir. 2019)).

III. CONCLUSION

For the reasons discussed above, we conclude that Petitioner has proven the challenged claims are unpatentable.¹⁶

In summary

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 2, 6–8, 12–14	102	Kiuchi	13, 14	1, 2, 6–8, 12
1, 2, 6–8, 12–14	103	Kiuchi, Rescorla	1, 2, 6–8, 12–14	
1, 2, 6–8, 12–14	103 ¹⁷	Kiuchi, RFC 1034		
1, 2, 6–8, 12–14	103 ¹⁸	Kiuchi, RFC 1034, Rescorla		
Overall Outcome			1, 2, 6–8, 12–14	

¹⁶ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

¹⁷ As explained above, we do not reach this ground of unpatentability because it would not change our Order or offer any additional analysis of disputed issues.

¹⁸ As explained above, we do not reach this ground of unpatentability because it would not change our Order or offer any additional analysis of disputed issues.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1, 2, 6–8, and 12–14 of the '151 patent are unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2015-01047
Patent 7,490,151 B2

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THE MANGROVE PARTNERS MASTER FUND, LTD. and APPLE INC.,
Petitioner,
v.
VIRNETX INC.,
Patent Owner.
Case IPR2015-01046
Patent 6,502,135 B1

THE MANGROVE PARTNERS MASTER FUND, LTD., APPLE INC.,
and BLACK SWAMP IP, LLC,
Petitioner,
v.
VIRNETX INC.,
Patent Owner.
Case IPR2015-01047
Patent 7,490,151 B2

Before MICHAEL P. TIERNEY, *Vice Chief Administrative Patent Judge*,
KARL D. EASTHOM and STEPHEN C. SIU, *Administrative Patent Judges*.

EASTHOM, *Administrative Patent Judge*.

DECISION

Granting In Part Patent Owner's Motion for Additional Discovery
37 C.F.R. §§ 42.20 and 42.51(b)(2)

I. INTRODUCTION

Pursuant to the Remand Schedule and Discovery Motion Order (Paper 80, “Order”), VirnetX Inc. (“VirnetX” or “Patent Owner”) filed a Motion for Additional Discovery (Paper 81, “Motion” or “Mot.”).¹ In IPR2015-01046, the Mangrove Partners Master Fund, Ltd. (“Mangrove”) and Apple Inc. (“Apple”) (collectively “Petitioner”), filed a “Partial Opposition to Patent Owner’s Motion for Additional Discovery.”² Paper 82 (unredacted “Opposition” or “Opp.”). Patent Owner filed a Reply to Petitioner’s Opposition to Patent Owner’s Discovery Motion. Paper 85 (“Disc. Reply”). As noted, regarding discovery, Mangrove, Apple, and Black Swamp, LLC (also collectively “Petitioner”) filed materially similar papers and exhibits in IPR2015-01047. *Supra* notes 1, 2; IPR2015-0147, Papers 90–92 & 94.

In IPR2015-01046, in a Petition filed on April 14, 2015, Petitioner Mangrove requested *inter partes* review of claims 1, 3, 4, 7, 8, 10, and 12 of U.S. Patent No. 6,502,135 B1 (“the ’135 patent”). After instituting review on October 7, 2015 (Paper 11 (“Institution Decision”)), the Board joined Apple on January 25, 2016 (*supra* note 2) and thereafter conducted a trial and issued a Final Written Decision, holding claims 1, 2, 6–8, and 12–14 of the ’135 patent unpatentable. *See* IPR2015-01046, Paper 71.

¹ Unless otherwise noted, citations refer to IPR2015-01046. The parties raised identical discovery issues and filed materially similar papers in both cases. This Order applies to both cases.

² Apple filed a petition on October 26, 2015 in IPR2016-00062, and the Board joined it as a party in IPR2015-01046 on January 25, 2016. Apple Inc. and Black Swamp, LLC, respectively filed a petition in IPR2016-00063 on October 26, 2015 and in IPR2016-00167 on November 6, 2015, and the Board joined them as parties in IPR2015-01047, respectively on January 25, 2016 and February 4, 2016.

Similarly, in IPR2015-01047, in a Petition filed on April 14, 2015, Petitioner Mangrove requested *inter partes* review of claims 1, 2, 6–8, and 12–14 of U.S. Patent No. 7,490,151 B2 (“the ’151 patent”). After instituting review on October 7, 2015 (“Institution Decision”), the Board joined Apple on January 25, 2016 and Black Swamp, LLC on February 4, 2016 (*supra* note 2), and thereafter conducted a trial and issued a Final Written Decision, holding claims 1, 2, 6–8, and 12–14 of the ’151 patent unpatentable. *See* IPR2015-01047, Paper 80.

Patent Owner appealed the Final Written Decisions. Pursuant to the appeals, the United States Court of Appeals for the Federal Circuit issued a decision vacating the Final Written Decisions and remanding to consider an issue on the merits of unpatentability and to allow Patent Owner to file a motion for additional discovery to support its real party in interest contentions. *See VirnetX Inc. v. The Mangrove Partners Master Fund, Ltd., Apple Inc.*, No 2017-1368, *VirnetX Inc. v. The Mangrove Partners Master Fund, Ltd., Apple Inc., Black Swamp*, No. 2017-1383, 2019 WL 2912776 (Fed. Cir. July 8, 2019) (the “*Remand Decision*”).

The Federal Circuit’s mandate after the *Remand Decision* issued on August 14, 2019. *See* Paper 78, 1. Accordingly, after reviewing the parties’ proposed schedules for the remand trial (*see* Papers 78–80), the Order set a deadline of November 8, 2019 for the close of discovery, so that the decision on remand may be completed by February 14, 2020 pursuant to SOP 9.³ *See*

³ “The Board has established a goal to issue decisions on remanded cases within six months of the Board’s receipt of the Federal Circuit’s mandate. The mandate makes the judgment of the Federal Circuit final and releases jurisdiction of the remanded case to the Board.” PTAB Standard Operating Procedure 9, Procedure for Decisions Remanded from the Federal Circuit for

Order, 3–4. As noted in the Order, Patent Owner bears the burden on the Motion.

II. THE FEDERAL CIRCUIT’S REMAND DECISION

The Order specifies that the parties “shall follow the court’s guidance as set forth in the” *Remand Decision*. Paper 80, 2 & n.2. The *Remand Decision* explains that Patent Owner’s theory involves its contention that Apple, who joined the Petitions (*supra* note 2), “was in some way involved in the [P]etitions” through RPX:

While the proceedings were pending, VirnetX learned that Mangrove gained equity in RPX, an entity that purports to help “companies mitigate and manage patent risk and expense by serving as an intermediary through which they can participate more efficiently in the patent market.” J.A. 7070. After institution, Mangrove disclosed that it owned about five percent of RPX, which made it RPX’s fifth largest shareholder. J.A. 7213, 7220. In a March 2016 letter, Mangrove stated that it recently met with management from RPX. J.A. 7221. VirnetX requested authorization to move for additional discovery to explore the relationship between Mangrove and RPX, which had previously filed time-barred petitions because Apple was found to be a real party in interest. During a conference call, VirnetX conveyed this evidence to the Board and asserted that Mangrove’s attorney had only previously represented RPX. J.A. 6246, 6251–52. *VirnetX believed that, through RPX, Apple was in some way involved in the petitions.* The Board did not let VirnetX move for additional discovery because the alleged facts “d[id] not show more than a mere possibility that something useful [would] be discovered and [was] therefore insufficient to show beyond mere speculation that discovery would be in the interests of justice.” J.A. 448; J.A. 2243. The

Further Proceedings (Nov. 9, 2017) (“SOP 9”), *available at* <https://usptogov.sharepoint.com/sites/bf319f98/Shared%20Documents/Forms/AllItems.aspx?FolderCTID=0x012000F14F79D244FFB74496C315D37020EB04>.

Board then rejected VirnetX's contention that RPX was a real party in interest for lack of evidence. J.A. 45; J.A. 84.

Remand Decision at *3 (emphasis added).

Of course, as the *Remand Decision* recognizes, Apple sought joinder after the filing of the Petitions and prior to the Institution Decisions (“pre-institution” (*see supra* note 2)), so Apple necessarily became involved in the proceedings at some point as a joined party, albeit primarily after the Institution Decisions. *See* note 2; *Remand Decision* at *3 (“At this stage in the proceedings, we see no prejudice in Apple’s continued involvement, but we leave open the question of whether prejudice could arise later.”).

Patent Owner contends “[t]he evidence suggests . . . that Mangrove did not initiate the IPRs on its own volition, but rather to support RPX’s efforts.” Paper 81, 9. Referring to the *RPX Corp.* Board decisions, Patent Owner also contends “RPX was improperly acting as Apple’s proxy.”⁴ *See id.* at 8. Patent Owner also seeks useful information as to its “position that RPX is an unnamed RPI and/or privy.” *Id.* at 6.

During the teleconference discussing the contours and authorization of the contemplated Motion, Vice Chief Judge Tierney specifically “cautioned VirnetX” at least twice that “*an overly broad discovery request is more likely to get denied than a narrowly tailored one.*” Ex. 1047, 32:12–14 (emphasis added), 17–19 (“But I do want to make sure—again, there is a

⁴ *RPX Corp. v. VirnetX Inc.*, IPR2014-00171, Paper 57 at 2–7 (July 14, 2014) (“*RPX Corp.*”) (denying institution because un-named RPI Apple was served with a complaint more than 1 year before its proxy, RPX, filed its petition). *RPX Corp.* actually involved denial of seven petitions in Cases IPR2014-00171–77 challenging four VirnetX patents, including both patents at issue here. *See RPX Corp.*, Paper 57 at 1–2 (listing Cases IPR2014-00171–77 and denying institution for all seven based on the same rationale and facts).

concern that if it's overly broad, it could get denied.”). Vice Chief Judge Tierney explained “[t]his is something we’ve always talked about. It’s not particular to this case.” *Id.* at 37:10–12.

The discovery here will be useful only if it relates to communications or activities before the filing of the Petitions and the Institution Decisions, because as noted above, the court stated “VirnetX believed that, through RPX, Apple was in some way *involved in the [P]etitions.*” *See Remand Decision* at * 3 (emphasis added). Moreover, as Petitioner argues, “[t]he Federal Circuit has held that the ‘focus of § 315(b) is on institution,’ *Power Integrations, Inc. v. Semiconductor Components Indus., LLC*, 926 F.3d 1306, 1314–15 (Fed. Cir. 2019), and that ‘the time-bar determination may be decided fully and finally at the institution stage,’ *Wi-Fi One, LLC v. Broadcom Corp.*, 878 F.3d 1364, 1373 (Fed. Cir. 2018) (en banc). *Opp.* 5.

Under 35 U.S.C. § 316 (a) (5), “[t]he Director shall prescribe regulations . . . setting forth standards and procedures for discovery of relevant evidence, including that such discovery shall be limited to—(A) the deposition of witnesses submitting affidavits or declarations; and (B) *what is otherwise necessary in the interest of justice.*” (Emphasis added). In other words, Congress narrowed discovery here, relative to district court discovery, to “relevant evidence . . . necessary in the interest of justice.” *See id.*

However, Patent Owner did not tailor its discovery to seek relevant pre-institution evidence—i.e., evidence of communications, documents, and things occurring at a time prior to the date of Institution Decisions (i.e., October 7, 2015) to show any alleged involvement in the Petitions, despite

the Board's cautionary instruction to narrowly tailor its request during the teleconference as discussed above.

For its part, as discussed further below, Mangrove voluntarily complied with Patent Owner's discovery requests to the extent they involve discovery of communications, documents, and things arising before the Institution Decisions. Under 37 C.F.R. § 42.51(b)(2)(i),

[t]he parties may agree to additional discovery between themselves. Where the parties fail to agree, a party may move for additional discovery. The moving party must show that such additional discovery is in the interests of justice, except in post-grant reviews where additional discovery is limited to evidence directly related to factual assertions advanced by either party in the proceeding (see § 42.224). The Board may specify conditions for such additional discovery.

Under the rule, Mangrove voluntarily agreed to the relevant additional discovery requested in the Motion, including by supplying written answers to interrogatories (instead of the requested depositions). With the caveat discussed below regarding the allowance of additional interrogatories in lieu of depositions, Mangrove's compliance satisfies the interests of justice standard specified in 35 U.S.C. § 316(a)(5), by producing relevant evidence arising pre-institution, for the reasons noted above and as discussed further below. *See Remand Decision* at *3 (focusing on the Petitions); *Power Integrations* (focusing on pre-institution); *Wi-Fi One* (similar); 35 U.S.C. § 316 (a) (5) ("interest of justice" standard). Any deposition or post-institution discovery does not satisfy the interests of justice standard, because considering the additional interrogatories allowed as discussed below, Mangrove's written answers suffice as to the depositions, and Patent Owner does not explain persuasively how obtaining evidence of communications, documents, and things occurring over the past three or four

years would somehow relate to showing any RPI status (or a privity relationship between Mangrove and RPX), and how Apple was involved in the Petitions filed over four years ago. Also, Patent Owner does not explain persuasively in its Motion why it should be granted redundant discovery from third party RPX except to state that the redundant discovery would provide an evidentiary crosscheck on the requested Mangrove discovery. Disc. Reply 5.

Patent Owner's broad requests are unduly burdensome as to RPX as unreasonably duplicative as the requested discovery is already sought, and can be obtained from, Mangrove. Further, Patent Owner's requests are unduly burdensome as they seek documents that are not reasonably limited in time to the date of institution and Patent Owner provides little, if any justifiable reason, for seeking any and all documents created years after the critical institution date. Additionally, Petitioner Mangrove provided voluntary production. Based on the record presented, we hold that Patent Owner's broad requests do not satisfy the interest of justice standard proscribed by 35 U.S.C. § 316(a)(5).

Nevertheless, even though the Board need only provide a binary grant or denial on the Motion, given the short time frame for completing this proceeding by February 14, 2020 pursuant to SOP 9, given the focus on pre-institution activities as specified by *Power Integrations*, 926 F.3d at 1314–15, and to ensure sufficient discovery for Patent Owner in the interests of justice, we exercise our discretion on this particular record and tailor the discovery request by 1) imposing a pre-institution cut-off date for discovery purposes as noted above, and 2) allowing 10 interrogatories of Mangrove in lieu of the sought-after depositions of Mangrove, as specified further below.

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In exercising discretion, we note Patent Owner’s discovery request agrees implicitly, at least in certain portions and to a certain extent, with this pre-institution cut-off date. For example, Patent Owner seeks “[c]ommunications, documents, or things, relating to Mangrove Partners’ *decision to pursue and initiate* IPR2015-01046 and IPR2015-01047.” Motion, App’x A, 4 (RFP No. 4) (emphasis added). Any such decision necessarily would have occurred pre-institution. Similarly, Patent Owner agrees that the evidence should focus on “a relationship between the two entities *at the time of institution.*” Mot. 11 & n.4.

Similarly, with respect to the depositions, as Petitioner notes, Patent Owner previously agreed to the appropriateness of interrogatories in the interest of justice in the *RPX Corp.* Board cases relied upon by Patent Owner to support its Motion (*see* Mot. 3, 8; *supra* note 4):

VirnetX previously recognized that interrogatory responses in lieu of a deposition are appropriate. VirnetX’s Request for Deposition of Apple Inc. in IPR2014-00171 explained that “[t]o the extent Apple prefers to respond to this topic in writing instead of providing a witness, effectively treating the topic as a deposition by written question or an interrogatory, Apple may do so.”

Opp. 11 (citing *RPX Corp.*, Paper 57 at 1 (Ex. 2026, 1)).

A more detailed analysis of Patent Owner’s discovery requests according to guidance in *Garmin Int’l, Inc. v. Cuozzo Speed Techs. LLC*, IPR2012-00001, Paper 26 at 6 (PTAB Mar. 5, 2013) (precedential)) follows.

III. DISCOVERY ANALYSIS USING GARMIN FACTORS

As the *Remand Decision* recognizes, “[t]he Board has listed five factors important in determining whether discovery is in the interest of justice, including that there be more than a ‘mere possibility of finding something useful.’” *Remand Decision* at *3 (quoting *Garmin*, Paper 26 at

6). After weighing the *Garmin* factors and considering the briefing by the parties, and for the reasons listed in the Opposition, which we adopt as persuasive as summarized below, we determine that under the interest of justice, Petitioner Mangrove voluntarily complied with the Motion for the most part, other than as explained above and below with respect to allowing, out of an abundance of caution, 10 interrogatories in lieu of the request for depositions of Mangrove.

For the reasons explained above and further below, we determine that allowing time-unlimited discovery (i.e., not limited to pre-institution discovery), the depositions requested, and any discovery of RPX, does not meet the statutory interest of justice standard.

A. PATENT OWNER'S DISCOVERY OF MANGROVE

Patent Owner seeks the following discovery of Mangrove as requests for production (RFPs):

1. Requests for production from Mangrove directed to communications between Mangrove and RPX (as described in Appendix A, RFP Nos. 1–2), Mangrove's acquisition of RPX stock (as described in Appendix A, RFP No. 3), and Mangrove's decision to initiate the present IPR proceeding (as described in Appendix A, RFP No. 4).

Mot. 5–6 (footnote omitted).⁵

⁵ In the omitted footnote, VirnetX agrees that if Mangrove designates Nathaniel August as its corporate representative, it can proceed with a single four-hour deposition focused on Mr. August's testimony in his personal capacity and as the designated corporate representative for Mangrove.

In Opposition, Mangrove provides the following with respect to the RFPs:

1. VirnetX's Mangrove RFPs Are Largely Moot, and Should be Denied Otherwise

In response to VirnetX's Mangrove RFPs (Mot. 5, Appx. A), Petitioner Mangrove undertook a reasonable search for responsive communications, Documents, or things that existed prior to October 7, 2015, and, subject to certain objections, has either produced responsive documents or confirmed that it found none. *See* Ex. 1048. VirnetX's requests are thus largely moot, and it cannot show good cause to justify the balance of its discovery requests.

Mangrove RFP No. 1: Petitioner Mangrove “located no responsive communications, documents, or things concerning RPX and VirnetX or VirnetX patents” from before October 7, 2015. Ex. 1048, 1–2. This is consistent with Mangrove's prior productions, which show no involvement by RPX in preparing the petitions. Petitioner Mangrove understood this RFP to mean “RPX and (VirnetX or VirnetX patents),” not “(RPX and VirnetX) or VirnetX patents.” *Id.*

Mangrove RFP No. 2: Petitioner Mangrove “located no responsive communications between Mangrove Partners and RPX, or any documents or things concerning such communications, concerning patent office proceedings” from before October 7, 2015. Ex. 1048, 3–4. VirnetX has not established good cause for the broader production of “[c]ommunications, documents, or things concerning RPX and patent office proceedings.” Purely internal-to-Mangrove documents describing RPX's business model or mentioning post-grant proceedings are not probative of any relationship between Mangrove and RPX. *See Garmin* at 6–7. Mangrove's response to Mangrove RFP No. 3 further moots this request.

Mangrove RFP No. 3: “[W]ith respect to RPX stock that was acquired by Mangrove Partners prior to October 7, 2015, Petitioner Mangrove has . . . produced or identified communications, documents, or things sufficient to show

Mangrove Partners' reasons for acquiring that RPX stock and any underlying agreements surrounding Mangrove Partners' acquisition of that RPX stock." Ex. 1048, 4–5; *see* Ex. 1049; Ex. 1051; Ex. 1052; Ex. 1055; Ex. 1056; Ex. 2058. Prior to October

7, 2015, Mangrove Partners was a passive investor in publicly-traded RPX and there were no agreements between Mangrove Partners and RPX "surrounding Mangrove Partners' acquisition of that RPX stock." Ex. 1049, 5. Mangrove's production of information "sufficient to show" this topic is "sensible and responsibly tailored" and not so "overly burdensome to answer," and any request for *all* responsive "[c]ommunications, documents, or things" is improper as it needlessly encompasses duplicative documents not relevant to show any relationship between Mangrove and RPX. *See Garmin* at 6–7 (Factors 1 & 5).

Mangrove RFP No. 4: Petitioner Mangrove "has located no responsive communications, documents, or things, relating to both RPX and Mangrove Partners' decision to pursue and initiate IPR2015-01046 and IPR2015-01047." Ex. 1048, 5–6. VirnetX has not established good cause for discovery of *all* "[c]ommunications, documents, or things, relating to both RPX and Mangrove Partners' decision to pursue and initiate IPR2015-01046 and IPR2015-01047." The breadth of this RFP is unduly burdensome due to VirnetX's threat of separate litigation against Mangrove regarding the filing of these IPRs (see § III.C.2; Paper 9, 12–15) and conflicts with VirnetX's representation that its requests would "narrowly focus on the relationship between Mangrove and RPX." Mot. 6.

With respect to depositions, VirnetX seeks the following:

2. A deposition, limited to four hours, of Nathaniel August (Mangrove's Founder and President) on topics consistent with those contained in VirnetX's requests for production from Mangrove (as described in Appendix B).

3. A deposition, limited to four hours, of a corporate representative of Mangrove on topics consistent with those contained in VirnetX's requests for production from Mangrove (as described in Appendix C).

Mot. 5.

In response, Mangrove responds initially by stating "Mangrove has thus responded to VirnetX's present deposition requests as if they were interrogatories." Opp. 11. Mangrove's responses largely track its responses to the RFPs above, because Patent Owner seeks to depose Mr. August or another corporate representative on those topics, as indicated above. In other words, Mangrove provides written responses related to pre-institution discovery.

As an example, for Deposition Topics 1 and 2, Mangrove replies "Petitioner Mangrove has identified no communications with RPX before October 7, 2015, concerning "VirnetX or VirnetX patents" (Ex. 1049, 1-2) or "patent office proceedings" (*id.*, 3-4)."

For Deposition Topic 3, Mangrove provides supporting evidence and replies that Mangrove "[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].” Ex. 1049, 5 (quoting Ex. 1051, 5); Opp. 12 (quoting Ex. 1051, 5; Ex. 1049, 5). Mangrove adds “[b]efore October 7, 2015, Mangrove Partners was a passive investor in RPX, had acquired its RPX stock via public trades, and had entered no agreements with RPX regarding its acquisition of RPX stock.” Opp. 12 (quoting Ex. 1049, 5).

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For Deposition Topic 4, Mangrove provides supporting evidence and replies as follows:

Petitioner Mangrove “has identified no information relating to both RPX and Mangrove Partners’ decision to pursue and initiate IPR2015-01046 and IPR2015-01047.” Ex. 1049, 6–7. Mangrove’s reasons for pursuing and initiating IPR2015-01046 and IPR2015-01047 were unrelated to its RPX investment strategy—Mangrove pursued and initiated these IPRs “to increase the value of the Mangrove Partners Hedge Fund’s short position in VHC stock.” *Id.* (quoting Paper 9, 13); Ex. 2004, 2; Ex. 2006, 2; Ex. 1053; Ex. 1054.

Opp. 12.

Nevertheless, out of an abundance of caution, to ensure, under the interests of justice, that Mangrove’s responses comply with topics Patent Owner otherwise seeks to discover in a deposition, we grant 10 interrogatories limited to a pre-institution time frame with topics no broader than the requested deposition topics in Appendices C and D.

Garmin Factor 1

Under Garmin factor 1, “[t]he mere possibility of finding something useful, and mere allegation that something useful will be found, are insufficient to demonstrate that the requested discovery is necessary in the interest of justice.” *Garmin*, Paper 26 at 6. As Petitioner argues, Patent Owner’s requests for discovery for anything occurring after the date of the Institution Decisions, namely October 7, 2015, amounts to less than a mere possibility of finding something useful. *See* Opp. 5 (“The Federal Circuit has held that the ‘focus of § 315(b) is on institution,’ *Power Integrations, Inc. v. Semiconductor Components Indus., LLC*, 926 F.3d 1306, 1314–15 (Fed. Cir. 2019), and that ‘the time-bar determination may be decided fully

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and finally at the institution stage,’ *Wi-Fi One, LLC v. Broadcom Corp.*, 878 F.3d 1364, 1373 (Fed. Cir. 2018) (en banc).

As indicated in the Opposition as quoted above, Petitioner voluntarily complied with Patent Owner’s requests for discovery, to the extent Patent Owner sought discovery for “responsive communications, documents, or things” existing prior to the date of the Institution Decisions, October 7, 2017. *See* Mot. 5. As Petitioner argues, “[t]he only information or acts relevant to compliance with § 315(b) would be dated before October 7, 2015, the date these proceedings were instituted.” *Id.*

Under RFP1, Mangrove “‘located no responsive communications, documents, or things concerning RPX and VirnetX or VirnetX patents’ from before October 7, 2015.” Opp. 9 (quoting Ex. 1048, 1–2). Under RFP2, Petitioner “‘located no responsive communications between Mangrove Partners and RPX, or any documents or things concerning such communications, concerning patent office proceedings’ from before October 7, 2015.” Opp. 9 (quoting Ex. 1048, 3–4). Under RFP3, “[w]ith respect to RPX stock that was acquired by Mangrove Partners prior to October 7, 2015, Petitioner Mangrove has . . . produced or identified communications, documents, or things sufficient to show Mangrove Partners’ reasons for acquiring that RPX stock and any underlying agreements surrounding Mangrove Partners’ acquisition of that RPX stock.” Ex. 1048, 4–5; *see* Opp. 10 (quoting Ex. 1048, 4–5; citing Ex. 1049; Ex. 1051; Ex. 1052; Ex. 1055; Ex. 1056; Ex. 2058). Under RFP 4, “Mangrove ‘has located no responsive communications, documents, or things, relating to both RPX and Mangrove Partners’ decision to pursue and initiate IPR2015-01046 and IPR2015-01047.’” Ex. 1048, 5–6; *see* Opp. 10 (quoting Ex. 1048, 5–6).

Relative to the sought-after depositions of Mr. August or another Mangrove representative, Mangrove persuasively responds that it largely produced the sought-after information, albeit in interrogatory answer form, as noted above. Any other information from a deposition would be based on speculation, as Petitioner argues:

Because VirnetX possesses “the requested information without need of [additional] discovery” ([*Garmin*] Factor 3), it cannot demonstrate good cause for costly depositions in the speculative belief that they might demonstrate some inconsistency with Mangrove’s written responses or document productions. See *Garmin* at 6–7; *Nuseed Americas Inc. v. BASF Plant Sci. GMBH*, IPR2017-02176, Paper 20 at 3–5 (PTAB May 4, 2018) (denying a request for a deposition in light of voluntary written discovery).

Opp. 13.

Patent Owner contends Mangrove’s voluntary production does not satisfy its discovery requests based on alleged “self-serving representations” by Mangrove. See Mot. 5. Accordingly, to ensure, under the interests of justice, that Mangrove’s responses comply with topics Patent Owner otherwise seeks to discover in the requested deposition, we grant 10 interrogatories limited to the pre-institution time frame with topics no broader than the requested deposition topics in Appendices C and D of the Motion. Under *Power Integration*, which focuses on pre-institution as the relevant time frame for determining the sought-after privity or RPI relationships by Patent Owner, any pre-institution discovery amounts to “the mere possibility of finding something useful,” a “mere allegation that something useful will be found,” and an “insufficient . . . demonstrate[ion] that the requested discovery is necessary in the interest of justice.” *Garmin*, Paper 26, at 6. Patent Owner does not explain in its Motion persuasively

how post-institution discovery would show, for example, that RPX was involved in the Petition prior to institution. Patent Owner contends emails may contain earlier dated threads and attachments and may be informative about Mangrove's motivation prior to the date of the Institution Decisions. Disc. Reply 2. However, Patent Owner does not explain why the earlier dated threads and attachments would not have been covered by a discovery request reasonably limited in time to the date of institution.

The record shows, and Patent Owner argues, that Mangrove owned stock in RPX (*see* Remand Decision at *3), so any control relevant here would be by Mangrove over RPX, not by RPX over Mangrove, and Mangrove already filed a Petition at its own behest (for business reasons as discussed further below), prior to Apple's joinder and filing of Apple's joined petition (*see supra* note 2). Nothing Patent Owner points to suggests beyond mere speculation that after the Institution Decision, RPX would have communicated with Mangrove about Apple in relation to pre-institution activities with respect to the proceedings here.

Nevertheless, Patent Owner contends "[t]he requested discovery is important because RPX has previously been found to be time-barred under section 315(b) with respect to the patent at issue in this proceeding." Motion 6. Patent Owner cites *RPX Corp.*, Paper 5[7] at 5–7 to support the contention. *See* Mot. 3; *supra* note 4. In *RPX Corp.*, as indicated above (*see supra* note 4), the Board held RPX served as a proxy to file seven petitions challenging 4 patents (including the '135 patent) on behalf of un-listed RPI Apple, who was served with a complaint more than one year before RPX filed the petitions, time-barring the petitions and denying institution of *inter partes* review. *See id.* at 2–3; 35 U.S.C. § 315(b) ("An *inter partes* review

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may not be instituted if the petition requesting the proceeding is filed more than 1 year after the date on which the petitioner, real party in interest, or privy of the petitioner is served with a complaint alleging infringement of the patent”).

According to Patent Owner, other “evidence strongly suggests that Mangrove and RPX have an RPI or privity relationship with respect to these IPRs.” Mot. 10. As part of its theory, Patent Owner also asserts “RPX can and does file IPRs to serve its clients’ financial interests, and that a key reason clients pay RPX is to benefit from this practice in the event they are sued.” Mot. 7 (quoting *Applications in Internet Time, LLC v. RPX Corp.*, 897 F.3d 1336, 1351–52 (Fed. Cir. 2018), *cert. denied*, 139 S. Ct. 1366 (2019) (citations omitted) (“AIT”).

Mangrove provides evidence showing it had a valid business reason for filing the Petition, which Patent Owner described in its Preliminary Response. Namely, “[a]s VirnetX itself recognized in 2015, Mangrove initiated these proceedings as part of a short-selling investment strategy: it ‘pursued short positions in the publicly traded stock of . . . VirnetX Holding Corporation,’ and filed the present IPRs ‘to encourage such a drop in VHC’s stock price.’” Opp. 1 (quoting Paper 9 (Preliminary Response), 5); *see also* Opp. 3 (citing Ex. 1054; Ex. 2022); Ex. 1053, 1 (“[T]he PTAB said that it did not matter that Mangrove challenged VirnetX’s patents as part of a short-selling strategy, since the AIA allows anyone to file petitions.”); Ex. 1052, 1–2 (“VirnetX said that before filing the petitions, Mangrove held a short position of 270,000 shares of VirnetX stock. A month after the petitions were filed, when any movement in the stock price caused by the

challenge would have subsided, Mangrove no longer held a short position, VirnetX said.”).

In other words, VirnetX itself recognized that Mangrove filed the Petition as part of a short-selling strategy, as opposed to any connection with or direction by RPX. Based on this evidence and other evidence of record, Mangrove maintains

VirnetX’s conspiracy theory has no basis in reality. Mangrove’s acquisition of some publicly-traded shares of RPX did not make RPX a real party in interest or privy to Mangrove. The evidence already in this record coupled with Mangrove’s voluntary productions and responses prove there was no connection between Mangrove and RPX that could support a RPI/privy theory. VirnetX cannot show good cause for its remaining requests and its fishing expedition should be denied.

Opp. 1. Petitioner Mangrove also provides evidence supporting its theory that Mangrove sought to acquire RPX stock [REDACTED] starting in April 2015. *See* Opp. 4 (citing Ex. 1051, 2; Ex. 1055; Ex. 1056). Petitioner does not materially dispute Patent Owner’s contention about Mangrove’s activist campaign in RPX. *See* Opp. 4–5 (citing Ex. 1052, 8; Ex. 2058). According to a letter dated March 16, 2016, at some point prior (“recently”), Mangrove attempted to influence some of RPX’s decisions, but “RPX told Mangrove to ‘sell the stock if [Mangrove] didn’t like management’s decisions.’” Ex. 2058, 1, 2; *see* Opp. 5. Mangrove provides evidence that “[b]y May 16, 2016, Mangrove owned around 6% of RPX’s stock.” Opp. 4 (quoting Ex. 1052, 2).

Patent Owner fails to explain how Mangrove’s stock interest in RPX, as the fifth largest, and as an active, investor in Mangrove, indicates that any post-institution evidence will be relevant or useful under the interests of

justice standard. *See* Mot. 8–9 (“Throughout this proceeding, Mangrove gradually gained equity in RPX, at one point becoming its fifth largest shareholder.”). Patent Owner’s argument that Mangrove hired an attorney who filed petitions previously on behalf of RPX, and Patent Owner’s other evidence and arguments, add little to showing how post-institution discovery will provide anything useful beyond mere speculation. *See id.* at 9–10.

Patent Owner contends Mangrove only asserted it made “reasonable efforts to locate communications” and these assertions are “unclear and unverified.” Disc. Reply 4. In addition, Patent Owner contends “[i]t also appears that Mangrove did not investigate non-written communications, or written communications that no longer exist.” *Id.* We interpret Mangrove’s response as seeking to include all forms of communications prior to October 7, 2015 using reasonable efforts. *See, e.g.,* Opp. 2 (“Petitioner Mangrove has undertaken a reasonable search for communications, documents, or things that existed prior to October 7, 2015, and located no responsive communications, documents, or things concerning RPX and VirnetX or VirnetX patents, including communications between Mangrove Partners and RPX, or any documents or things relating to such communications, concerning VirnetX or VirnetX patents.”).

In summary, Petitioner Mangrove complied with Patent Owner’s discovery request with respect to pre-institution discovery for the RFPs and largely complied as written responses in lieu of a deposition, and any deposition or post-institution discovery would involve mere speculation. Furthermore, Patent Owner agrees that the evidence should focus on “a relationship between the two entities *at the time of institution.*” Mot. 11 & n.4. Accordingly, *Garmin* factor 1 weighs heavily against Patent Owner.

The broad discovery request, in light of the answers and evidence provided by Mangrove, and unlimited in scope as to the relevant pre-institution time, fails under the interest of justice standard. In addition, we grant 10 interrogatories of reasonable scope to ensure that Patent Owner has an opportunity to fully explore the identified topics.

Garmin Factor 2

Under Garmin factor 2, “[a]sking for the other party’s litigation positions and the underlying basis for those positions is not necessary in the interest of justice.” *Garmin*, Paper 26, at 6. Petitioner provides evidence that Patent Owner’s Preliminary Response raised the specter of suing Mangrove related to Mangrove’s filing of the Petition. *See* Opp. 13–14 (citing Paper 9, 11–12; Ex. 2021). Any discovery for information arising after the date of institution, including RFPs and a deposition, would be too broad for the reasons explained above. In addition, it may serve to involve possible litigation positions. As indicated, Mangrove voluntarily provided pre-institution discovery, including written answers in lieu of a deposition (and we grant 10 interrogatories as noted above and below).

Patent Owner argues

Petitioner[] appear[s] to acknowledge that Mangrove has ‘internal-to-Mangrove documents’ relating to RPX that it nevertheless has refused to produce (*id.* at 9), as well as communications, documents, or things relating to its acquisition of RPX stock that it refuses to produce (*id.* at 10) because of the purported fear of litigation (*id.* at 10–11). Mangrove’s concerns are unsupported, and should not block discovery of relevant documents and related information that are now exposed to exist.

Disc. Reply 5 (citing Opposition). We interpret Mangrove’s response as limiting production to communications between Mangrove and RPX. *See*

Opp. 9. This appears reasonable under the interests of justice, because Patent Owner seeks discovery about that relationship. In addition, Petitioner contends its response to RFP No. 3 partially moots the request in RFP No. 2. In the response to RFP No. 3, Mangrove explains it “was a passive investor in publicly-traded RPX and there were no agreements between Mangrove Partners and RPX ‘surrounding Mangrove Partners’ acquisition of that RPX stock.” Opp. 10 (quoting Ex. 1049, 5). To the extent Patent Owner seeks more discovery, as noted above and below, we grant 10 interrogatories of Mangrove herein.

Patent Owner argues any alleged litigation threat by Patent Owner “is baseless” because “VirnetX has never suggested it would sue Mangrove.” Disc. Reply 4–5 (citing Opp. At 13–14). Nevertheless, in the Preliminary Response, Patent Owner argues “[t]he only conclusion that can be drawn from Petitioner’s attempt to hide these RPIs is that it was doing so in an attempt to shield them from any liability arising out of the filing of the Petition.” Paper 9, 12 (emphasis added)(footnote omitted). In the omitted footnote, Patent Owner describes the following:

Consider, for example, the complaint filed against Ferrum Ferro Capital, LLC, an investment fund that filed the petition in IPR2015-00858, apparently employing a similar strategy to that of Petitioner and its RPIs. In the Complaint, Allergan (the patent owner) alleges that Ferrum Ferro Capital, LLC’s conduct “constitutes attempted civil extortion and malicious prosecution under California law in addition to violating California’s Unfair Competition Law.” See Ex. 2021.

Id. at 12 & n.2. Hence, by referring to “any liability arising out of the filing of the Petition,” and describing an “example” of a complaint against a company “employing a similar strategy,” Patent Owner raised the specter of possible litigation involving Mangrove. *See id.*

Accordingly, *Garmin* factor 2 weighs against Patent Owner. The broad discovery request, unlimited in scope as to the relevant pre-institution time and thereby piercing into possible litigation strategy that might occur post-institution, fails under the interest of justice standard.

Garmin Factor 3

Under *Garmin* factor 3, “[i]nformation a party can reasonably figure out or assemble without a discovery request would not be in the interest of justice to have produced by the other party.” *Garmin*, Paper 26, at 6.

Patent Owner does not appear to have the ability to generate all post-institution discovery via other means. Nevertheless, Patent Owner did have access to some information arising post-institution. *See* Remand Decision at *3 (“While the proceedings were pending, VirnetX learned that Mangrove gained equity in RPX, an entity that purports to help ‘companies mitigate and manage patent risk and expense by serving as an intermediary through which they can participate more efficiently in the patent market.’”); Mot. 11 (citing Ex. 2058, 1 (Mr. August’s letter of March 17, 2016)). This post-institution evidence provided Patent Owner a mechanism to infer possible pre-institution activities (according to Patent Owner’s argument, Mot. 11 & n.11), but as discussed above, Patent Owner provides no reason beyond speculation as to why more post-institution evidence would be in the interest of justice as relevant evidence tending to show RPX’s connection as a privy or RPI of Mangrove at the time of institution, or show Apple’s involvement in the Petitions.

Mangrove complied with pre-institution discovery in connection with the RFPs, as explained above. With respect to the requested depositions, as discussed above, Petitioner shows Patent Owner possesses “the requested

information without need of [additional] discovery” in the form of written responses. *See* Opp. 13. Nevertheless, we grant additional discovery via interrogatories as noted above to ensure the interests of justice.

Accordingly, *Garmin* factor 3 is essentially moot regarding pre-institution evidence, because Petitioner complied with the discovery request in terms of useful pre-institution discovery and in the form of written responses in lieu of a deposition, and we grant 10 interrogatories. Setting aside the lack of relevance of any post-institution evidence, *Garmin* factor 3 weighs slightly in favor of Patent Owner with respect to that evidence.

Garmin Factor 4

Under *Garmin* factor 4, “[t]he questions should be easily understandable.” *Garmin*, Paper 26, at 6. The questions appear to be understandable, but *Garmin* factor 4 is moot with regard to relevant pre-institution evidence, because Mangrove complied therewith. Setting aside the lack of relevance with respect to post-institution RFP evidence, *Garmin* factor 4 weighs slightly for Patent Owner with respect to such post-institution RFP evidence. *Garmin* factor 4 does not strictly apply to a deposition, but Patent Owner must account for this factor and all *Garmin* factors with respect to its interrogatories.

Garmin Factor 5

Under *Garmin* factor 5, “[t]he requests must not be overly burdensome to answer, given the expedited nature of *Inter Partes* Review.” *Garmin*, Paper 26, at 7. Given the time schedule for this remand pursuant to SOP 9, producing post-institution discovery, and providing a deposition for pre-institution and post-institution discovery, represents an overly burdensome request under the statutory interests of justice standard. As

discussed above, Mangrove voluntarily complied with the RFPs with respect to pre-institution discovery, and provided written responses in lieu of a deposition. In addition, we grant 10 interrogatories to ensure that Patent Owner has an opportunity to fully explore the identified topics. As to the post-institution discovery, as discussed above, *Power Integration* indicates the focus must be on any privity or RPI relationship up until institution. Under the circumstances here, given Mangrove's voluntary compliance and the allowance of 10 interrogatories, a deposition and any post-institution discovery would not be "responsibly tailored according to a genuine need," *Garmin*, Paper 26 at 7. Accordingly, *Garmin* factor 5 weighs against Patent Owner.

Summary of *Garmin* Factors and Statutory Standard

Based on the foregoing *Garmin* factors and the statutory interests of justice standard, Patent Owner does not meet the burden on the Motion with respect to discovery that Mangrove did not provide already, with the caveat related to the additional interrogatories of Mangrove, which we allow to ensure sufficient discovery by Patent Owner.

In other words, as discussed above, the Board need only provide a binary grant or denial on the Motion, and the panel specifically warned Patent Owner about such a binary decision in the event of an overly-broad discovery request. Nevertheless, given the short time frame involved with respect to completing this proceeding by February 14, 2020 pursuant to SOP 9, and given the focus on pre-institution activities as specified by *Power Integrations*, 926 F.3d at 1314–15, to ensure sufficient discovery for Patent Owner in the interests of justice, we exercise our discretion on this particular record and tailor the discovery request by 1) imposing a pre-institution cut-

off date for discovery purposes as noted above, and 2) allowing 10 interrogatories (inclusive of any subparts) of Mangrove in lieu of the sought-after depositions of Mangrove.

B. PATENT OWNER'S DISCOVERY OF RPX

Patent Owner seeks the following discovery from RPX:

4. Requests for production from third-party RPX directed to communications between Mangrove and RPX (as described in Appendix D, RFP Nos. 1-2) and Mangrove's acquisition of RPX stock (as described in Appendix D, RFP No. 3).

5. A deposition, limited to four hours, of a corporate representative of RPX on topics consistent with those contained in VirnetX's requests for production from RPX (as described in Appendix E).

Motion 5–6.

Under *Garmin* factor 3, “[i]nformation a party can reasonably [acquire] without a discovery request would not be in the interest of justice to have produced by the other party.” The requests must not be overly burdensome to answer, given the expedited nature of *Inter Partes* Review. Mangrove concedes “that there may be some overlap in its requests” with respect to Mangrove. *See* Mot. 14. In other words, as Mangrove argues, Patent Owner “seeks to discover the same communications from both Mangrove and RPX.” *Opp.* 14.

Patent Owner seeks this additional discovery as a “multi-pronged approach proposed . . . with requests for production and depositions from both Mangrove and RPX,” characterizing it as “critical here given the interest and right to cross-check and corroborate any such communications and the significant passage of time from when *VirnetX* first wanted to move for discovery nearly four years ago.” Mot. 14 (emphasis added). This fails

to explain how a “cross-check” of recent and *current* documents and things that may or may not even exist relates to events occurring about “four years ago.” Such an open-ended time frame in the discovery request does not satisfy the statutory interests of justice standard.

Under *Garmin* factor 5, Petitioner argues persuasively that “injecting RPX into this proceeding would disrupt the remand schedule and be ‘overly burdensome . . . given the expedited nature of *Inter Partes* Review.’” Opp. 15 (citing *Garmin*, Paper 26, at 6–7.

As Mangrove provides overlapping information, for similar reasons to those discussed above, *Garmin* factor 1 weighs heavily against Patent Owner based on the similar information already provided, because nothing beyond mere speculation shows RPX would have anything other than duplicative, and hence, un-useful, information. Under *Garmin* factor 1, “[t]he party requesting discovery should already be in possession of evidence tending to show beyond speculation that in fact something useful will be uncovered.” *Garmin*, Paper 26, at 6. *Garmin* factors 2 and 4 weigh slightly in favor of Patent Owner, because it does not appear that the discovery will involve litigation positions with respect to RPX, and the questions seem understandable for the most part.

Based on the foregoing discussion, inserting a third party under the circumstances here does not satisfy the statutory interest of justice standard. Weighing the *Garmin* factors in light of the statutory interest of justice standard, Patent Owner does not meet the burden on the Motion with respect to discovery of RPX.

IV. ORDER

We *grant-in-part* the Motion for discovery of Mangrove for pre-institution materials and *deny* the Motion for discovery of depositions related to Mangrove as forth above, and deny the Motion for discovery of RPX. We *grant* Patent Owner 10 interrogatories, inclusive of any subparts, limited to a pre-institution time frame and the topics no broader than the requested deposition topics in Appendices C and D of the Motion. Accordingly, Patent Owner may serve upon Mangrove, up to 10 interrogatories, limited as noted, within 7 business days of this Order, and Petitioner Mangrove shall respond within 10 business days after any such service. The parties may agree to any type of service. Finally, the parties shall confer and jointly file a proposed redacted public version of this Order within 7 business days of this Order.

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IPR2015-01047 - Patent 7,490,151 B1

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THE MANGROVE PARTNERS MASTER FUND, LTD. and APPLE INC.,
Petitioner,

v.

VIRNETX INC.,
Patent Owner.
Case IPR2015-01046
Patent 6,502,135 B1

THE MANGROVE PARTNERS MASTER FUND, LTD., APPLE INC.,
and BLACK SWAMP IP, LLC,
Petitioner,

v.

VIRNETX INC.,
Patent Owner.
Case IPR2015-01047
Patent 7,490,151 B2

Before MICHAEL P. TIERNEY, KARL D. EASTHOM, and
JASON W. MELVIN, *Administrative Patent Judges*.

MELVIN, *Administrative Patent Judge*.

DECISION

Denying Patent Owner's Request on Rehearing of
Order Regarding Additional Discovery
37 C.F.R. §§ 42.71(d)

Patent Owner, VirnetX Inc., filed a Request for Rehearing (Paper 92, “Req. Reh’g”) asking the Board to reconsider the Decision Granting In Part Patent Owner’s Motion for Additional Discovery (Paper 88, “Disc. Dec.”).¹ In the Request, Patent Owner argues that the Discovery Decision should have granted depositions of Petitioner The Mangrove Partners Master Fund, Ltd. (“Mangrove”), and Nathaniel August (Mangrove’s Founder and President), or a combined, single deposition. Req. Reh’g 1, 2–5. Patent Owner also argues that the entire Discovery Decision must be reconsidered by a new panel because the original panel was constitutionally defective according to *Arthrex, Inc. v. Smith & Nephew, Inc.*, 941 F.3d 1320 (Fed. Cir. Oct. 31, 2019), *petition for cert. filed*, No. 19-1204 (U.S. April. 6, 2020). Req. Reh’g 1, 5–9. We decline to address Patent Owner’s *Arthrex* argument where Patent Owner did not raise the issue in the initial appeals and the Federal Circuit did not direct repaneling for the remands here.

Regarding the deposition Patent Owner seeks, the Discovery Decision noted that Mangrove had already responded to Patent Owner’s deposition requests with written interrogatories related to pre-institution discovery. Disc. Dec. 7, 12–14. The Discovery Decision nonetheless permitted an additional ten interrogatories covering the material identified by Patent Owner’s deposition topics. *Id.* at 8, 14, 16. It did not grant Patent Owner a deposition because “Mangrove’s written answers suffice as to the depositions.” *Id.* at 7. The Discovery Decision further noted both that Patent Owner previously agreed that written responses could substitute for a

¹ Unless otherwise noted, citations refer to IPR2015-01046. The parties raised identical issues and filed materially similar papers in both cases. This Decision applies to both cases.

deposition in another proceeding (*id.* at 9) and also that the schedule on remand weighed against a deposition (*id.* at 24–25). The Discovery Decision determined that, beyond interrogatory responses, “other information from a deposition would be based on speculation.” *Id.* at 16. In that determination, the Discovery Decision found persuasive Petitioner’s argument that the additional cost imposed by depositions outweighed any speculative benefit associated with them. *Id.* (quoting Paper 82, 13); *accord id.* at 20 (“[A]ny deposition . . . would involve mere speculation.”).

Patent Owner argues that “deposition-based discovery and written discovery serve fundamentally different roles” and therefore interrogatories cannot take the place of a deposition. Req. Reh’g 2–3. Patent Owner argues that Mangrove’s asserted valid business reason for filing the Petition—a short-selling strategy—counsels for deposition-based discovery because it was initiated at the same time as Mangrove’s alleged connection with nonparty RPX Corp. *Id.* at 3–4. According to Patent Owner, the Discovery Decision overlooked Patent Owner’s argument regarding the timing of Mangrove’s two possible justifications for filing its Petitions. *Id.* at 4. Patent Owner argues that “a deposition is a critical element” of the discovery it seeks. *Id.* at 4–5.

In this Request for Rehearing, Patent Owner bears the burden to show that the Discovery Decision should be modified. 37 C.F.R. § 42.71(d) (2015). To that end, Patent Owner must identify those matters it “believes the Board misapprehended or overlooked.” *Id.* As noted above, Patent Owner points to its arguments that written discovery could not substitute for deposition-based discovery, and that the timing of Mangrove’s possible

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explanations for filing the petitions suggests both were actual motivations, implicating an additional real party in interest.

The Discovery Decision made the determination that written interrogatories would satisfy Patent Owner's need for additional discovery. Disc. Dec. 8, 14, 16. Thus, the Discovery Decision allows Patent Owner to explore the timing of Mangrove's two possible justifications. Because the Discovery Decision permitted interrogatories as broad as the requested deposition topics (*see id.* at 14), it did not overlook Patent Owner's argument regarding Mangrove's justification for filing the petitions in these proceedings. Rather, it addressed that argument by permitting a different discovery mechanism.

The Discovery Decision permitted written interrogatories rather than deposition-based discovery after determining that approach better fit with this proceeding's schedule (*id.* at 24–25) and better balanced the cost of discovery against Patent Owner's demonstrated need (*id.* at 16). Other than general statements regarding the value of depositions (*see* Req. Reh'g 3), Patent Owner does not demonstrate that the Discovery Decision misapprehended or overlooked anything material in making that determination. Indeed, determinations regarding additional discovery are discretionary decisions that weigh a number of factors, as identified in the Discovery Decision. *See Wi-Fi One, LLC v. Broadcom Corp.*, 887 F.3d 1329, 1339 (Fed. Cir. 2018) (noting PTAB discovery decisions are reviewed for an abuse of discretion); Disc. Dec. 9–26 (citing *Garmin Int'l, Inc. v. Cuozzo Speed Techs. LLC*, IPR2012-00001, Paper 26 at 6 (PTAB Mar. 5, 2013) (precedential)).

Here, one discretionary factor involved Patent Owner's overly broad discovery request, in terms of the unlimited time frame for the discovery sought, and in terms of seeking duplicative discovery with respect to nonparty RPX Corp. *See* Disc. Dec. 8. Despite finding that Patent Owner's overly broad request failed to meet the interests of justice standard, the panel exercised its discretion and modified the request in order to accommodate Patent Owner, even though the panel previously had cautioned Patent Owner that an overly broad request carried a risk of outright denial (i.e., without a discretionary modification by the panel accruing to Patent Owner's benefit). *Id.* at 5–8.

Based on the foregoing, the Discovery Decision reached a correct determination under the interests of justice standard regarding the suitability of interrogatories in this proceeding when considering the cost of depositions, the impact depositions would have on the schedule, Patent Owner's demonstrated need for depositions, and the panel's discretionary modification of Patent Owner's overly broad discovery request that failed to meet the interests of justice standard.

Accordingly, it is hereby ORDERED that Patent Owner's Request for Rehearing is *denied*.

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE OFFICE OF THE UNDERSECRETARY AND DIRECTOR OF
THE UNITED STATES PATENT AND TRADEMARK OFFICE

THE MANGROVE PARTNERS MASTER FUND, LTD., APPLE INC., and
BLACK SWAMP IP, LLC,
Petitioner,

v.

VIRNETX, INC.,
Patent Owner.

IPR2015-01046 (Patent 6,502,135 B1)
IPR2015-01047 (Patent 7,490,151 B2)

Before ANDREW HIRSHFELD, *Commissioner for Patents, Performing the
Functions and Duties of the Under Secretary of Commerce for Intellectual
Property and Director of the United States Patent and Trademark Office.*

ORDER

IPR2015-01046 (Patent 6,502,135 B1)

IPR2015-01047 (Patent 7,490,151 B2)

The Office has received a request for Director review of the Final Written Decision in each of the above captioned cases. *See, e.g.*, IPR2015-01046, Ex. 3100. The requests were referred to Mr. Hirshfeld, Commissioner for Patents, Performing the Functions and Duties of the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office.

It is ORDERED that the requests for Director review are denied; and
FURTHER ORDERED that the Patent Trial and Appeal Board's Final Written Decisions are the final decisions of the agency.

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IPR2015-01047 (Patent 7,490,151 B2)

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